REMARKS

Applicants present claims 1-34. Claims 1-17 and 19 are withdrawn. Claim 18 is amended consistent with original disclosure, including the specification (such as at pages 16-17) and, for instance the Figures. As to claims 29 and 30, the language "specified" is canceled in favor of 'constant,' which is also consistent with the original disclosure. As claim 29, no longer recites unnecessary surplus language. This does not narrow claim scope. Amended claims 33 and 34 refer to conducting the method wherein the temperature is set to the specified range and the concentration is set to the specified range, respectively. Amended claim 34 refers to free carbon dioxide gas. The language is also drawn from the original disclosure. There is no intent to present new matter.

Applicants confirm their prior election with traverse. It is suggested that if the elected claims are held allowable, that favorable reconsideration and re-joinder be granted. If the Examiner exercises his discretion and elects not to rejoin the withdrawn claims, then the withdrawn claims can be canceled by an Examiner's Amendment to place the elected claims in condition to receive a Notice of Allowance.

Applicants' specification has been corrected. The Examiner's constructive suggestion is acknowledged with appreciation.

Claims 29, 30, 33 and 34 define the embodiments consistent with the requirements of 35 U.S.C. 112(2). Amended claim 29 does not recite "any one of" and recites the water flow rate is "constant," and therefore it is definite. So too with the recited 'constant' in claim 30. Claims 33 and 34 include more conventional method language. The Examiner's careful consideration is noted and his suggestions are appreciated.

Applicants' claims 18, 20-31, 33 and 34 define unobvious inventions over JP H03-048499A in view of either the Carlson or Meinert references.

Applicants respectfully submit that the references would not have been combined, but even if they were, the claimed inventions would not have been suggested to a person of only ordinary skill in the art.

According to an aspect of the invention as claimed, the method for producing carbonated water comprises supplying water and carbon dioxide gas to a first carbon dioxide gas dissolver, and then an output from such first dissolver can be fed (supplied) to a second carbon dioxide gas dissolver. The second dissolver is in line, such in a pipeline from the first carbon dioxide gas

dissolver. Any gas that may separate out from the liquid discharged from the first dissolver is dissolved in the second dissolver and thus does not escape to the outside environment (outside air, etc.). Consequently, carbonated water with less variation in concentration is obtainable, which is consistent with a pre-determined concentration selection.

The inventions would not have been obvious to a person of ordinary skill in the art.

The primary reference does not include a secondary dissolver in the form of a static mixer downstream of a membrane contactor. This and other shortcomings in the primary reference would remain deficient even if it were combined, which not conceded, with either secondary reference.

For instance, in the Carlson reference, the mixing methodology is illustrated by FIG. 1. In Carlson's FIG. 1, the tublular supplying element 3 has a number of micropores 6 that are disposed at the edge portion of the liquid supplying side within a tubular conduit 2 of a mixer in order to be normal (perpendicular) to the axis line of the tubular conduit 2. Although somewhat crudely stated, in Carlson the gas supplied to the tubular supplying element 3 is disbursed in a foam from the micropores 6 and is mixed with the liquid supplied to the edge portion of the liquid supply side of the tubular conduit 2 of the mixer. Afterwards, it is mixed by the plurality of mixing elements 7, 9, 11 and 13 of the mixer. Indeed, Carlson's disclosed paper bleaching process (column 3, line 3 *et. seq.*) would not have commended itself as suitable for the method as claimed herein. It does not show a multi-stage process in which output from a first carbon dioxide gas dissolver is in line (such as in a pipeline) with the input to a second carbon dioxide gas dissolver. In short, the Carlson methodology would not have led, directed, suggested, taught, or the like a person of ordinary skill in the art to Applicants' method according to claim 18, claims 20-31, claim 33 or claim 34.

Or, in the alternative, even if the JP' 499 were combined with the Meinart reference, a point not conceded, the inventions would not have been obvious. For instance, in the Meinart reference, there apparently is only disclosure regarding mixing different liquids, but apparently no disclosure of mixing gas and liquid(s). So, if in Meinart the liquids are mixed, the liquids are not readily ordinarily separated, and thus the mixing concentration rarely changes.

The Meinart reference discloses mixing liquids for beverage syrups and then discharging the mixed liquids to a storage container through a blending apparatus 17, such as indicated at column 6, circa line 35. Blending liquids would not have offered reasoning, suggestion, motivation or a teaching to use a second gas dissolving unit in line (in series) with the output of a first carbon dioxide gas dissolver. Meinart refers to liquid accumulators open to the atmosphere (column 4, line 40 or so;

column 6, circa line 60) and that would not have suggested the multi-stage gas dissolving as defined in Applicants claims, nor have led to modifying the primary reference in the manner postulated in the Office Action. Although not stated in so many words, one might wonder whether Meinart is re-describing some kind of a variable-throated venturi-like mixing device (see reference to infinitely variable annular passage) for mixing liquids (making beverages), which would not have commended itself to a first carbon dioxide dissolver and an output thereof being in line with a second (subsequent) carbon dioxide gas dissolver.

Applicants respectfully request favorable reconsideration of claim 32. Applicants courteously submit claim 32 defines an unobvious invention over JP '499 in view of either Carlson or Meinart when taken in further view of JP 2001-293343. In addition to the comments hereinabove as to the first three references, Applicants note in JP '343 at FIG. 1 that reference numeral 3 designates a flow sensor, but that is not the flow switch as postulated in the Office Action. Accordingly, it is suggested the rejection be withdrawn since the JP '343 reference does not disclose by reference numeral 3 a feature relied on the Office Action.

Conclusion

Applicants respectfully solicit favorable consideration and a Notice of Allowance.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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